

Abstract

To provide an inductance element of a lumped constant type electromagnetic delay line which can easily be made as an ultra-small chip shape and obtain a preferable connection 5 state at each section. Spiral-shaped inductors L0B, L4A, and L4B are formed on a first insulating substrate 15, and inductors L4A and L4B are connected in series. Spiral-shaped inductors L1, L3, and L5 are formed on a second and third insulating substrates 22 and 33. Spiral-shaped inductors L2A, L2B, and 10 L6A are formed on a fourth insulating substrate 41, and the inductors L2A and L2B are connected in series. The first to fourth insulating substrates 15 to 41 are stacked on one another, and the inductors L0B to L6A are vertically connected. The 15 inductors L2A and L2B, and L4A and L4B are divided into two portions in horizontal directions to form one section, and connected with positive coupling to the preceding and the following sections not divided in the horizontal direction.